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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Fabien Marino et al.

Atty Docket No.: IPT-015.01

Serial No: 10/630,220

Art Unit: 1651

Filed: July 20, 2003

Examiner: Not yet known

For: *Cell Cultures*

CERTIFICATE OF FIRST CLASS MAILING

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*Shirine Darvish*

Shirine Darvish

Mail Stop Amendment  
Commissioner for Patents  
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Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR § 1.97 (b)(3)**

Sir:

In compliance with the requirement of 37 C.F.R § § 1.56 and 1.97(b)(3), submitted herewith on Form PTO-1449 is a list of publications known to Applicants and/or their Attorney/Agent. *Copies of U.S. Patent Documents (References AA-AL, BF-BQ, and CI-CV) are not enclosed because this application was filed after June 30, 2003; therefore, they are not required to be provided in this application.* However, Applicants will gladly furnish copies of some or all of same upon request. A copy of each publicly available document listed under Foreign Patent Documents and Other Documents are being submitted herewith. Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached Form PTO-1449.

Applicants have cited for the Examiner's consideration certain issued U.S. patents and co-pending U.S. patent applications that are owned at least in part by the assignee of this application, that describe subject matter related to the present invention. The co-pending applications are listed herewith in accordance with M.P.E.P. 609 III.D which states: "Applicants may wish to list U. S. patent application numbers on other than Form PTO-1449 or PTO/SB/08A and 08B format to avoid the application numbers of pending applications being published on the patent. If a citation is not printed on the patent but has been considered by the examiner in accordance with this section, the patented file will reflect that fact as noted in subsection III.C(2) above."

No copies of the co-pending applications have been provided. If the Examiner wishes to have copies of the co-pending applications, Examiner should contact the Attorney or Agent of record. Applicants respectfully request that the Examiner consider these listed documents and indicate that each was considered by making appropriate notations on this Information Disclosure Statement.

Examiner Initials	Our Docket No.	S.N.	Title	Filing Date	Status	Document Enclosed
	IPT-013.01	10/409,620	High Throughput Purification, Characterization and Identification of Recombinant Proteins	8 April 2003	Pending	no
	IPT-014.01	10/370,268	Methods and Apparatuses for Characterizing Stability of Biological Molecules	23 February 2003	Pending	no
	IPT-014.02	10/926,284	Methods and Apparatuses for Characterizing Refolding and Aggregation of Biological Molecules	25 August 2004	Pending	no
	IPT-019.01	10/246,812	Methods and Apparatuses for Purification	18 September 2002	Pending	no
Date Considered:				Examiner's Name:		

Applicants have listed dates of publication on the attached Form PTO-1449 for the cited documents based on information presently available to the undersigned. However, the listed

publication dates should not be construed that the information in the cited documents was actually published or otherwise publicly available on the date indicated.

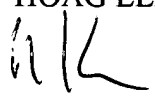
This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that each or all of the listed documents are material or constitute "prior art." Further, if the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents. Moreover, the Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

Under 37 C.F.R. 1.97(b)(3), this Information Disclosure Statement is being filed before the mailing of the first Office Action on the merits; therefore, no fee is believed to be due in connection with this submission. However, the Commissioner is authorized to charge any deficiencies or credit any overpayment to/from our **Deposit Account, No. 06-1448, Reference IPT-015.01.**

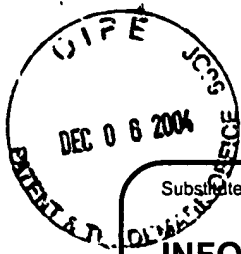
Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at (617) 832-1000.

Respectfully submitted,

FOLEY HOAG LLP

By:   
Theresa Kavanaugh  
Reg. No. 50,356  
Agent for Applicants

Dated: December 2, 2004  
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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 13

**Complete if Known**

Application Number	10/630,220
Filing Date	July 30, 2003
First Named Inventor	Fabien Marino et al.
Art Unit	1651
Examiner Name	Not yet known
Attorney Docket Number	IPT-015.01

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	AA	US- 3,917,527	11/4/75	Shaltiel	
	AB	US- 4,000,098	12/28/76	Hofstee	
	AC	US- 4,665,035	5/12/87	Tunac	
	AD	US- 5,075,234	12/24/91	Tunac	
	AE	US- 5,234,665	8/10/93	Ohta et al.	
	AF	US- 5,393,669	2/28/95	Brown	
	AG	US- 5,585,277	12/17/96	Bowie et al.	
	AH	US- 5,627,044	5/6/97	Brown	
	AI	US- 5,679,582	10/21/97	Bowie et al.	
	AJ	US- 5,705,813	1/6/98	Apffel et al.	
	AK	US- 5,792,664	8/11/98	Chait et al.	
	AL	US- 5,779,981	7/14/98	Danssaert et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	AM	CA 1,305,334	7/21/92	Chow et al.		
	AN	CA 2,184,195	4/16/02	Bowie et al.		
	AO	CA 2,236,339	12/6/97	Pakula et al.		
	AP	CA 2,253,587	5/9/97	Pantoliano et al.		
	AQ	DE 40 13 588	11/14/91			
	AR	EP 0 677 732	10/18/95	Kaye et al.		
	AS	EP 0 770 876	4/11/01	Pakula et al.		
	AT	EP 0 902 271	3/17/99	Andrews et al.		
	AU	EP 1 047 108	10/25/00	Skilling, J.		
	AV	WO 88/08028	10/20/88	Pantoliano et al.		
	AW	WO 93/24834	12/9/93	Chait et al.		
	AX	WO 95/11294	4/27/95	Danssaert et al.		
	AY	WO 97/01755	1/16/97	Jindal et al.		
	AZ	WO 97/12033	4/3/97	Hagedorn et al.		
	BA	WO 97/20952	6/12/97	Pakula et al.		
	BB	WO 97/42500	11/13/97	Pantoliano et al.		
	BC	WO 98/15969	4/16/98	Weinberg et al.		
	BD	WO 98/23630	6/4/98	Seed et al.		
	BE	WO 99/024050	5/20/99	Pantoliano et al.		

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**INFORMATION DISCLOSURE  
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Sheet 2 of 13

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Art Unit	1651
Examiner Name	Not yet known
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	BF	US- 5,837,529	11/17/98	Wan et al.	
	BG	US- 5,854,204	12/29/98	Findeis et al.	
	BH	US- 5,858,277	1/12/99	Chau et al.	
	BI	US- 5,886,155	3/23/99	Armah et al.	
	BJ	US- 5,959,738	9/28/99	Hafeman et al.	
	BK	US- 6,020,141	2/1/00	Pantoliano et al.	
	BL	US- 6,036,920	3/14/00	Pantoliano et al.	
	BM	US- 6,054,263	4/25/00	Danssaert et al.	
	BN	US- 6,136,555	10/24/00	Jones	
	BO	US- 6,214,293	4/10/01	Pantoliano et al.	
	BP	US- 6,232,085	5/15/01	Pantoliano et al.	
	BQ	US- 6,268,158	7/31/01	Pantoliano et al.	

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		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	BR	WO 00/077712	12/21/00	Eriksson et al.		
	BS	WO 00/11208	3/2/00	Aebersold et al.		
	BT	WO 00/45168	8/2/00	Bienvenut et al.		
	BU	WO 00/48004	8/17/00	Raillard et al.		
	BV	WO 00/79238	12/28/00	Wallace et al.		
	BW	WO 01/02848	1/11/01	Moore et al.		
	BX	WO 01/86302	11/15/01	Mendel-Hartvig et al.		
	BY	WO 02/056025	7/18/02	Awrey et al.		
	BZ	WO 02/059144	8/1/02	Haynes et al.		
	CA	WO 02/34876	5/2/02	Edwards et al.		
	CB	WO 03/002724	1/09/03	Edwards et al.		
	CC	WO 03/025004	3/27/03	Edwards et al.		
	CD	WO 03/025156	3/27/03	Vedadi et al.		
	CE	WO 03/027274	4/3/03	Edwards et al.		
	CF	WO 03/055904	7/10/03	Edwards et al.		
	CG	WO 03/071269	8/28/03	Senisterra et al.		
	CH	WO 03/083099	10/9/03	Edwards et al.		

Examiner  
SignatureDate  
Considered

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Sheet	3	of	13
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<i>Application Number</i>	10/630,220
<i>Filing Date</i>	July 30, 2003
<i>First Named Inventor</i>	Fabien Marino et al.
<i>Art Unit</i>	1651
<i>Examiner Name</i>	Not yet known
<i>Attorney Docket Number</i>	IPT-015.01

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	CI	US- 6,268,218	7/31/01	Pantoliano et al.	
	CJ	US- 6,270,954	8/7/01	Welch et al.	
	CK	US- 6,274,371	8/14/01	Colpan	
	CL	US- 6,281,493	8/28/01	Vestal et al.	
	CM	US- 6,291,191	9/18/01	Pantoliano et al.	
	CN	US- 6,291,192	9/18/01	Pantoliano et al.	
	CO	US- 6,303,322	10/16/01	Pantoliano et al.	
	CP	US- 6,318,157	11/20/01	Corso et al.	
	CQ	US- 6,423,948	7/23/02	Kwasnoski et al.	
	CR	US- 6,451,591	9/17/02	Edwards	
	CS	US- 6,569,631	5/27/03	Pantoliano et al.	
	CT	US- 2001/0003648	6/14/01	Pantoliano et al.	
	CU	US- 2001/013494	8/16/01	Maiefski et al.	
	CV	US 2002/0012982	1/31/02	Blakesley et al.	

[illegible]

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 4 of 13

### Complete if Known

Application Number	10/630,220
Filing Date	July 30, 2003
First Named Inventor	Fabien Marino et al.
Art Unit	1651
Examiner Name	Not yet known
Attorney Docket Number	IPT-015.01

### NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CY	Albala et al., "From genes to proteins: high-throughput expression and purific of the human proteome," J. Cell. Biochem., 80(2):187-91 (2000)	
	CZ	Anderson, "Rattle: A "Velocity Version of the Shake Algorithm for Molecular Dynamics Calculations," J Comput Phys, 52:24-34 (1983)	
	DA	Anteneodo et al., "Interaction of Dibucaine with the Transmembrane Domain of the Ca <sup>2+</sup> -ATPase of Sarcoplasmic Reticulum," Biochemistry, 33(40):12283-12290 (1994)	
	DB	Archambault et al.; " An Essential Component of a C- Terminal Domain Phosphatase that Interacts with Transcription Factor IIF in Saccharomyces Cerevisiae", Proc. Natl. Acad. Sci. USA, 94: 14300-14305, (December 1997)	
	DC	Babu et al., "Ionic strength-dependent transition of hen white lysozyme at low pH to a compact state and its aggregation on thermal denaturation," Eur. J. Biochem. 245, 781789 (1997)	
	DD	Bagshaw et al., Spectrophotometry and Spectrofluorometry: A Practical Approach, Edited by Harris & Bashford, pp. 91-114, IRL Press Ltd. (1987)	
	DE	Bell, J. E., Spectroscopy in Biochemistry, Vol. I, pp. 155-194, CRC Press (1981)	
	DF	Bellingham et al., "Self-aggregation characteristics of recombinantly expressed human elasin polypeptides," Biochim. Biophys. Acta 1550: 6-19 (2001)	
	DG	Biemann Klaus; " Contributions of Mass Spectrometry to Peptide and Protein Structure", Biomedical and Environmental Mass Spectrometry 16: 99-111, ( 1988)	
	DH	Bouvier, M. et al, "Importance of Peptide Amino and Carboxyl Termini to the Stability of MHC Class I Molecules," Science, 265: 398-402 (1994)	
	DI	Brand et al., "Fluorescence Probes for Structure," Ann. Rev. Biochem. 41:843 (1972)	
	DJ	Brandts et al., "Study of strong to ultra tight protein interaction using differential scanning calorimetry," Biochemistry, 29: 6927-6940, (1990)	
	DK	Braun et al., "Proteome-scale purification of human proteins from bacteria," PNAS, 99(5):2654-2659 (2002)	
	DL	Brooks et al., "CHARMM: A Program for Macromolecular Energy, Minimization, and Dynamics Calculations," J. Comput Chem., 4:187-217 (1983)	

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 5 of 13

## **Complete if Known**

Application Number	10/630,220
Filing Date	July 30, 2003
First Named Inventor	Fabien Marino et al.
Art Unit	1651
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## **NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	DM	Budisa et al., "High-level biosynthetic substitution of methionine in proteins by its analogs 2-aminohexanoic acid, selenomethionine, telluromethionine and ethionine in Escherichia coli," Eur. J. Biochem, 230:788-796 (1995)	
	DN	Burbaum et al., "Understanding Structural Relationships in Proteins of Unsolved Three-Dimensional Structure," Proteins 7:99-111 (1990)	
	DO	Bushnell et al., "Selenomethionine Incorporation in Saccharomyces cerevisiae RNA Polymerase II," Structure, 9:R11-R14 (2001)	
	DP	Caldwell et al., "Large scale purification process for recombinant NSI-OspA as a candidate vaccine for Lyme disease," Bioseparation, 6:115-123 (1996)	
	DQ	Cardamone et al., "Spectrofluorometric assessment of the surface hydrophobicity of proteins," Biochem J., 282:589-593 (1992)	
	DR	Carmichael et al., "Site-specific independent double labeling of proteins with reporter atoms," Biochem. Cell. Biol., 78:79-86 (2000)	
	DS	Chan et al., "Effects of Additives on Heat Denaturation of rhDNase in Solutions," Pharm. Res. 13: 756-761 (1996)	
	DT	Chavan, A.J. et al., "Interaction of Nucleotides with Acidic Fibroblast Growth Factor (FGF-1)," Biochemistry, 33:7193-7202 (1994)	
	DU	Chlebowski et al., "Calorimetry of Alkaline Phosphatase," Journal of Biological Chemistry, 254(13):5745-5753 (1979)	
	DV	Chlebowski et al., "Differential Scanning Calorimetry of Apo-, Apophosphoryl, and Metalloalkaline Phosphatases," Journal of Biological Chemistry, 252(20):7042-7052 (1977)	
	DW	Christendat et al., "Structural proteomics of an archaeon," Nat. Struct. Biol., 7(10):903-9 (2000)	
	DX	Christendat et al., "Structural proteomics: prospects for high throughput sample preparation," Prog. Biophys. Mol. Biol., 73(5):339-345 (2000)	
	DY	Clegg, R. M. et al., "Observing the helical geometry of double-stranded DNA in solution by fluorescence resonance energy transfer," Proc. Natl. Acad. Sci. U.S.A. 90:2994-2998 (1993)	
	DZ	Clegg, R. M. et al., "Fluorescence Resonance Energy Transfer Analysis of the Structure of the Four-Way DNA Junction," Biochemistry 31:4846-4856 (1992)	

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Art Unit	1641
Examiner Name	Not yet known
Attorney Docket Number	IPT-015.01

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	EA	Clare, et al., NMR of Proteins. In Topics in Molecular and Structural Biology, 1993, S. Neidle, Fuller, W., and Cohen, J.S., eds., Macmillan Press, Ltd., London	
	EB	Davidson et al., "Cooperatively folded proteins in random sequence libraries," Nature Structure Biology 2(10):856-863 (1995)	
	EC	Dayhoff et al., "Establishing Homologies in Protein Sequences," Meth. Enzymol. 91: 524-545, (1983)	
	ED	Delcher et al.; "Improved Microbial Gene Identification with Glimmer", Nucleic Acids Research 27(23): 4636-4641, ( 1999)	
	EE	Denisov, "Thermal stability of proteins in intermolecular complexes," Biophysical Chemistry, 44:71-75 (1992)	
	EF	Draveling et al., "SwellGel: an affinity chromatography technology for high-capacity and high-throughput purification of recombinant-tagged protein," Protein Expr. Purif., 22(2):359-66 (2001)	
	EG	Dyr et al., "Separation used for purification of recombinant proteins," J. Chromatography, 699:383-401 (1997)	
	EH	Edwards et al., "Bridging structural biology and genomics: assessing protein interaction data with known complexes," Trends Genet., 18(10):529-36 (2002)	
	EI	Edwards et al., "Protein production: feeding the crystallographers and NMR spectroscopists," Nat. Struct. Biol., 7:970-2 (2000)	
	EJ	Eisenfield et al., "Constrained optimization and protein structure determination," Am J Physiol 261:C376-386 (1991)	
	EK	Falick et al.; "Low-Mass Ions Produced From Peptides by High - Energy Collision-Induced Dissociation in Tandem Mass Spectrometry", J. Am. Soc. Mass. Spectrom. 4: 882-893, ( 1993)	
	EL	Feng et al., "An integrated ten-pump, eight-channel parallel LC/MS system for automated high-throughput analysis of proteins," Anal. Chem., 73(23):5691-7 (2001)	
	EM	Formosa et al.; "Using Protein Affinity Chromatography to Probe Structure of Protein Machines", Methods in Enzymology 208: 24-45, (1991)	
	EN	Froimowitz, "The Development of Computer Simulations of the Geometries and Thermodynamics of Biological Molecules" Biotechniques 8(6):640-652 (1990)	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 7 of 13

**Complete if Known**

Application Number	10/630,220
Filing Date	July 30, 2003
First Named Inventor	Fabien Marino et al.
Art Unit	1651
Examiner Name	Not yet known
Attorney Docket Number	IPT-015.01

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	EO	Gloss et al., "Urea and thermal equilibrium denaturation studies on the dimerization domain of <i>Escherichia coli</i> Trp repressor," Biochemistry, 36:5612-5623 (1997)	
	EP	Griffin et al., "Advances in Proteome Analysis by Mass Spectrometry," The Journal of Biological Chemistry, 276(49):45497-45500 (2001)	
	EQ	Griffin et al., "Direct database searching with MALDI-PSD spectra of peptides," Rapid Commun. Mass. Spectrom, 9(15):1546-51 (1995)	
	ER	Griffin et al., "Quantitative Proteomic Analysis Using a MALDI Quadrupole Time-of-Flight Mass Spectrometer," Anal. Chem. (73):978-986 (2001)	
	ES	Hadener et al., "Purification, characterization, crystallisation and X-ray analysis selenomethionine-labelled hydroxymethylbilane synthase from <i>Escherichia coli</i> ," Eur. J. Biochem., 211(3):615-24 (1993)	
	ET	Henikoff and Henikoff, "Amino acid substitution matrices from protein blocks," Proc. Nat. Acad. Sci. USA 89: 10915-10919, (1992)	
	EU	Hillenkamp et al., "Matrix Assisted UV-Laser Desorption/Ionization: A New Approach to Mass Spectrometry of Large Biomolecules, Biological Mass Spectrometry," Elsevier Science Publ., pp. 49-66 (1999)	
	EV	Houchuli et al., "New metal chelate adsorbent selective for proteins and peptides containing neighbouring histidine residues," J. Chromatogr., 411:177-84 (1987)	
	EW	Hui et al., "High-throughput protein crystallization," J. Struct. Biol., 142(1): 154-61 (2003)	
	EX	Janknecht et al., "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus," Proc. Natl. Acad. Sci. USA, 88:8972-8976 (1991)	
	EY	Johnson et al., "A Structural Basis for Sequence Comparisons," J. Mol. Biol., 233:716-738 (1993)	
	EZ	Kay et al., "Four-dimensional heteronuclear triple-resonance NMR spectroscopy of interleukin-1 beta in solution," Science, 249(4967):411-4 (1990)	
	FA	Kini et al. "Molecular Modeling of Proteins: A Strategy for Energy Minimalization by Molecular Mechanics in the AMBER Force Field," J Biomol Struct Dyn 9:475-488 (1991)	
	FB	Kleman et al., "A Predictive and Feedback Control Algorithm Maintains a Constant Glucose Concentration in Fed-Batch Fermentations," Applied and Environmental Microbiology, 57(4):910-917 (1991)	
	FC	Koch et al.; "A Role for Ctr9p and Paf1p in the Regulation of G1 Cyclin Expression in Yeast", Nucleic Acids Research 27(10): 2126-2134, (1999)	
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Sheet 8 of 13

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	FD	Korz et al., "Simple fed-batch technique for high cell density cultivation of Escherichia coli," J. Biotechnol., 39(1):59-65 (1995)	
	FE	Koth et al., "From clone to crystal: maximizing the amount of protein samples for structure determination," Adv. Protein Chem., 65:343-52 (2003)	
	FF	Kuge et al., "Use of a fusion protein to obtain crystals suitable for X-ray analysis: Crystallization of a GST-fused protein containing the DNA-binding domain of DNA replication-related element-binding factor, DREF," Protein Sci., 6(8):1783-6 (1997)	
	FG	Kurganov, B.I., "Kinetics of protein aggregation. Quantitative estimation of the chaperone-like activity in test-systems based on suppression of protein aggregation," 67:409-422 (2002)	
	FH	Labrou et al., "The affinity technology in downstream processing," J. Biotechnol., 36(2):95-119 (1994)	
	FI	Larsson et al., "High-throughput protein expression of cDNA products as a tool in functional genomics," J. Biotechnology, 80:143-157 (2000)	
	FJ	Lee et al., "A small heat shock protein stably binds heat-denatured model substrates and can maintain a substrate in a folding-competent state," 16:659-671 (1997)	
	FK	Lee et al., "High Cell Density Cultivation of Escherichia Coli W Using Sucrose as a Carbon Source," Biotech Letters 15:971 (1993)	
	FL	Lee, M. et al., "In Vitro Cytotoxicity of GC Sequence Directed Alkylating Agents Related to Distamycin," J. Med. Chem. 36:863-870 (1993)	
	FM	Lepock et al., "The nuclear matrix is a thermolabile cellular structure," Cell Stress Chaperones, 6(2):136-47 (2001)	
	FN	Lepock et al., "Influence of Transition Rates and Scan Rate on Kinetic Simulations of Differential Scanning Calorimetry Profiles of Reversible and Irreversible Protein Denaturation," Biochemistry 31: 12706-12712 (1992).	
	FO	Lepock et al., "Protein Denaturation in Intact Hepatocytes and Isolated Cellular Organelles During Heat Shock," J Cell Biol. 122:1267-1276 (1993)	
	FP	Lepock et al., "Thermal Denaturation of the Ca <sup>2+</sup> -ATPase of Sarcoplasmic Reticulum Reveals Two Thermodynamically Independent Domains," Biochemistry, 29(3):681-689 (1990)	
	FQ	Lesley, S.A., "High-Throughput Proteomics: Protein Expression and Purification in the Postgenomic World," Protein Expression and Purification, 22:159-164 (2001)	
	FR	Leung et al., "Thermal activation of the bovine Hsc70 molecular chaperone at physiological temperatures: physical evidence of a molecular thermometer," 1(1):78-89 (1996)	

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Sheet 9 of 13

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	FS	Li et al., "Analysis of Single Mammalian Cell Lysates by Mass Spectrometry," J. Am. Chem. Soc. 118:11662-11663 (1996)	
	FT	Lustbader et al., "Expression of human chorionic gonadotropin uniformly labeled NMR isotopes in Chinese hamster ovary cells: an advance toward rapid determination of glycoprotein structures," J. Biomol NMR, 7(4):295-304 (1996)	
	FU	Lybrand, "Molecular Simulation and Drug Design," J Pharm Belg 46:49-54 (1991)	
	FV	Markl et al., "Cultivation of Escherichia coli to high cell densities in a dialysis reactor," Appl. Microbiol. Biotechnol., 39(1):48-52 (1993)	
	FW	Maxwell et al., "Refolding out of guanidine hydrochloride is an effective approach for high-throughput structural studies of small proteins," Protein Sci., 12(9):2073-80 (2003)	
	FX	Mitraki et al., "Protein Folding Intermediates and Inclusion Body Formation," Trends Biotech 7, 690-697 (1989).	
	FY	Mizutani et al., "Effect of amino acid supplement on cell yield and gene product in Escherichia coli harboring plasmid," Biotechnology and Bioengineering, 28(2):204-209 (1986)	
	FZ	Mosbach et al.; "Formation of Proinsulin by Immobilized Bacillus Subtilis", Nature, 302: 543-545, (April 7, 1993)	
	GA	Needleman et al., "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins," J. Mol. Biol., 48:443-453 (1970)	
	GB	Ozaki, H. et al., "The estimation of distances between specific backbone-labeled sites in DNA using fluorescence resonance energy transfer," Nucleic Acids Res. 20:5205-5214 (1992)	
	GC	Paalme et al., "Glucose-Limited fed-batch cultivation of Escherichia coli with computer-controlled fixed growth rate," Biotechnology and Bioengineering, 35(3):312-319 (1990)	
	GD	Pack et al., "Improved bivalent miniantibodies, with identical avidity as whose antibodies, produced by high cell density fermentation of Escherichia coli," Biotechnology, 11(11):1271-7 (1993)	
	GE	Palva et al.; "Secretion of Interferon by Bacillus Subtilis", Gene 22 : 229-235, (1983)	
	GF	Pan et al., "Physiological Constraints in Increasing Biomass Concentration of Escherichia Coli B in Fed-Batch Culture," Biotech Letters, p.89-94 (1987)	

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	GG	Parker et al., "An Integrated Analysis of Intermediates and Transition States in Protein Folding Reactions," <i>J. Mol. Biol.</i> 253, 771786 (1995)	
	GH	Patterson, "Application of combined mass spectrometry and partial amino acid sequence to the identification of gel-separated proteins," <i>Electrophoresis</i> , 17:877-891 (1996)	
	GI	Patterson, "Matrix-assisted laser-desorption/ionization mass spectrometric approaches for the identification of gel-separated proteins in the 5-50 pmol range," <i>Electrophoresis</i> , 16(7):1104-14 (1995)	
	GJ	Pedersen, "Conformational Properties of Molecules by ab Initio Quantum Mechanical Energy Minimization," <i>Environ Health Perspect</i> 61:185-190 (1985)	
	GK	Pfuetzner et al., "Replication Protein A," <i>J. Biol. Chem.</i> 272: 430-434 (1997)	
	GL	Poklar et al., "pH and Temperature-Induced Molten Globule-Like Denaturated States of Equinatoxin II: A Study by UV-Melting, DSC, Far- and Near-UV CD Spectroscopy and ANS Fluorescence", <i>Biochemistry</i> 36:14345-14352 (1997)	
	GM	Probert and Johnson; "Identification of a 47 kDa Fibronectin-Binding Protein Expressed by <i>Borrelia burgdorferi</i> Isolate B31", <i>Molecular Microbiology</i> 30(5):1003-1015, (1998)	
	GN	Qoronfle et al., "Production of selenomethionine-labeled recombinant human neutrophil collagenase in <i>Escherichia coli</i> ," <i>J. Biotechnol.</i> , 39(2):119-28 (1995)	
	GO	Rees et al., "Some thermodynamic implications for the thermo stability of proteins," <i>Protein Science</i> , 10:1187-1194 (2001)	
	GP	Risenberg D., "High cell density fermentation of recombinant <i>Escherichia coli</i> expressing human interferon alpha 1," <i>Appl. Microbiol. Biotechnol.</i> , 34:77-82 (1990)	
	GQ	Rosen et al., "Selective methyl group protonation of perdeuterated proteins," <i>J. Mol. Biol.</i> , 263(5):627-36 (1996)	
	GR	Ryckaert et al., "Numerical Integration of the Cartesian Equations of Motion of a System with Constraints: Molecular Dynamics of n-Alkanes," <i>J Comput Phys</i> 23:327 (1977)	
	GS	Sandhu et al., "Expression of Modified Human Cytochrome P450 1A2 in <i>Escherichia coli</i> : Stabilization, Purification, Spectral Characterization, and Catalytic Activities of the Enzyme," <i>Archives of Biochemistry and Biophysics</i> , 309(1):168-177 (1994)	
	GT	Sasso et al., "Thermal denaturation of bacterial and bovine dihydrofolate reductases and their complexes with NADPH, trimethoprim and methotrexate," <i>J. Biomol. Struct. Dyn.</i> , 12:1023-1032 (1995)	

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	GU	Savchenko et al., "Strategies for structural proteomics of prokaryotes: Quantifying the advantages of studying orthologous proteins and of using both NMR and X-ray crystallography approaches," <i>Proteins</i> , 50(3):392-9 (2003)	
	GV	Scopes, Robert K., "Protein Purification, Principles and Practice," Third Ed., Springer Verlag, NY (1993)	
	GW	Semisotnov et al., "Study of the "Molten Globule" Intermediate State in Protein Folding by a Hydrophobic Fluorescent Probe," <i>Biopolymers</i> , 31:119-128 (1991)	
	GX	Shevchenko et al., "Mass Spectrometric Sequencing of Proteins From Silver-Stained Polyacrylamide Gels," <i>Anal. Chem.</i> 68: 850-858, (1996)	
	GY	Shpigel et al., "Expression, purification and applications of staphylococcal Protein A fused to cellulose-binding domain," <i>Biotechnol. Appl. Biochem.</i> , 31:197-203 (2000)	
	GZ	Smith et al., "Determinants of the substrate specificity of human cytochrome P-450 CYP2D6: design and construction of a mutant with testosterone hydroxylase activity," <i>Biochem. J.</i> , 331:783-792 (1998)	
	HA	Sopta et al., "Isolation of Three Proteins That Bind to Mammalian RNA Polymerase II", <i>The Journal of Biological Chemistry</i> , 260(18): 10353-10360, (August 25, 1995)	
	HB	Studts et al., "Application of Fed-Batch Fermentation to the Preparation of Isotopically Labeled or Selenomethionyl-Labeled Proteins," <i>Protein Expression and Purification</i> , 16:109-119 (1999)	
	HC	Surolia et al., "Unusual structural stability and ligand induced alterations in oligomerization of a galectin," <i>FEBS Lett.</i> , 409:417-420 (1997)	
	HD	Takahashi et al., "Thermodynamics of the Binding of D-Glucose to Yeast Hexokinase," <i>American Chemical Society</i> , (1981)	
	HE	Tian et al., "A splicing enhancer complex controls alternative splicing of double pre-mRNA," <i>Cell</i> . 74(1):105-14 (1993)	
	HF	Ueda et al., "Is there a specific receptor for anesthetics? Contrary effects of alcohols and fatty acids on phase transition and bioluminescence of firefly luciferase," <i>Biophys. J.</i> , 75:1052-1057 (1998)	
	HG	Valaskovic et al., "Attomole protein characterization by capillary electrophoresis-mass spectrometry," <i>Science</i> 273:1199-1202 (1996)	
	HH	Valaskovic et al., "Attomole-sensitivity electrospray source for large-molecule mass spectrometry," <i>Anal. Chem.</i> 67:3802 (1995)	

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	HI	van Gunsteren et al., "Algorithms for macromolecular dynamics and constraint dynamics," <i>Mol Phys</i> 34(5):1311-1327 (1977)	
	HJ	Villaverde et al., "Effect of nucleotides on the thermal stability and on the deuteration kinetics of the thermophilic F <sub>0</sub> F <sub>1</sub> ATP synthase," <i>Eur. J. Biochem.</i> , 244:441-448 (1997)	
	HK	Vorm et al., "Improved Resolution and Very High Sensitivity in MADLI TOF of Matrix Surfaces Made by Fast Evaporation," <i>Anal. Chem.</i> 66:3281 (1994)	
	HL	Wallace et al., "Site-specific independent double labeling of proteins with repo atoms," <i>Biochem. Cell Biol.</i> , 78(2):79-86 (2000)	
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Examiner  
SignatureDate  
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				Application Number	10/630,220
				Filing Date	July 30, 2003
				First Named Inventor	Fabien Marino et al.
				Art Unit	1651
				Examiner Name	Not yet known
				Attorney Docket Number	IPT-015.01
				Sheet	13

[illegible]

Examiner Signature		Date Considered	
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